

Comparisons of Job Characteristics

Focus Occupation: [Geoscientists, Except Hydrologists and Geographers \(19-2042\)](#)

Associated Occupation: [Geographers \(19-3092\)](#)

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

| | |
|----|--|
| << | Focus occupation element is much lower |
| < | Focus occupation element is lower |
| 0 | Focus occupation element is at a similar level |
| > | Focus occupation element is at a higher level |
| >> | Focus occupation element is at a much higher level |

Knowledge

Similarity of Focus Occupation to Associated Occupation: 49

Focus Occupation: Geoscientists, Except Hydrologists and Geographers (19-2042)

Associated Occupation: Geographers (19-3092)

| Associated Occupation's Key Knowledge Elements | Average Rating, All Occupations | Associated Occupation's Rating | Focus Occupation's Rating | Evaluation of Focus Occupation | |
|--|---------------------------------|--------------------------------|---------------------------|--------------------------------|---|
| Geography | 3.9 | 24.8 | 17.4 | << | Extensive education and/or training may be required |
| English Language | 11.2 | 17.2 | 13.8 | << | Extensive education and/or training may be required |
| Sociology and Anthropology | 4.1 | 15.2 | 2.8 | << | Extensive education and/or training may be required |
| Computers and Electronics | 8.4 | 15.0 | 15.0 | 0 | Current knowledge level may be sufficient |
| History and Archeology | 2.6 | 10.7 | 3.5 | << | Extensive education and/or training may be required |
| Philosophy and Theology | 3.2 | 9.3 | 2.0 | << | Extensive education and/or training may be required |
| Foreign Language | 2.7 | 7.4 | 1.6 | << | Extensive education and/or training may be required |

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills

Similarity of Focus Occupation to Associated Occupation: 93

Focus Occupation: Geoscientists, Except Hydrologists and Geographers (19-2042)

Associated Occupation: Geographers (19-3092)

| Associated Occupation's Key Skills Elements | Average Rating, All Occupations | Associated Occupation's Rating | Focus Occupation's Rating | Evaluation of Focus Occupation | |
|---|---------------------------------|--------------------------------|---------------------------|--------------------------------|--|
| Writing | 9.2 | 15.5 | 12.2 | << | Extensive development of skills in this area may be required |
| Reading Comprehension | 10.7 | 15.1 | 16.0 | 0 | Current skill level may be sufficient |
| Science | 4.5 | 13.8 | 15.1 | 0 | Current skill level may be sufficient |
| Active Learning | 8.7 | 12.3 | 10.0 | < | A higher skill level may be required |

| | | | | | |
|--------------------|-----|------|-----|----|--|
| Systems Analysis | 6.5 | 11.6 | 8.6 | << | Extensive development of skills in this area may be required |
| Systems Evaluation | 6.4 | 11.0 | 8.3 | << | Extensive development of skills in this area may be required |

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

| Abilities | | Similarity of Focus Occupation to Associated Occupation: 98 | | | |
|--|---------------------------------|---|---------------------------|--------------------------------|---|
| Focus Occupation: Geoscientists, Except Hydrologists and Geographers (19-2042) Associated Occupation: Geographers (19-3092) | | | | | |
| Associated Occupation's Key Abilities Elements | Average Rating, All Occupations | Associated Occupation's Rating | Focus Occupation's Rating | Evaluation of Focus Occupation | |
| Oral Expression | 12.4 | 15.7 | 14.5 | 0 | Current ability level may be sufficient |
| Written Expression | 9.8 | 15.2 | 14.2 | 0 | Current ability level may be sufficient |
| Oral Comprehension | 12.5 | 14.9 | 14.8 | 0 | Current ability level may be sufficient |
| Written Comprehension | 11.0 | 14.4 | 16.0 | > | Current ability level is likely sufficient |
| Speech Clarity | 10.2 | 13.6 | 11.9 | < | Some improvement in abilities may be required |
| Inductive Reasoning | 10.2 | 13.5 | 13.2 | 0 | Current ability level may be sufficient |
| Near Vision | 11.1 | 13.3 | 12.8 | 0 | Current ability level may be sufficient |
| Category Flexibility | 9.0 | 12.8 | 12.3 | 0 | Current ability level may be sufficient |
| Mathematical Reasoning | 6.3 | 10.6 | 10.3 | 0 | Current ability level may be sufficient |
| Number Facility | 6.3 | 10.6 | 9.1 | < | Some improvement in abilities may be required |

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

| Activities that Both Occupations Have in Common | | Similarity of Focus Occupation to Associated Occupation: 95 |
|--|-------------------------|---|
| Focus Occupation: Geoscientists, Except Hydrologists and Geographers (19-2042) Associated Occupation: Geographers (19-3092) | | |
| Work Activities | Exclusivity of Activity | |
| Advise clients or customers | 19 | |
| Advise governmental or industrial personnel | 28 | |
| Analyze ecosystem data | 69 | |
| Analyze geological research data | 87 | |
| Analyze scientific research data or investigative findings | 27 | |
| Classify plants, animals, or other natural phenomena | 69 | |
| Collect geographic or physical data | 81 | |
| Collect scientific or technical data | 30 | |
| Collect statistical data | 47 | |
| Communicate technical information | 4 | |

| | |
|---|----|
| Conduct field research or investigative studies | 52 |
| Conduct geological surveys | 89 |
| Confer with research personnel | 50 |
| Confer with scientists | 54 |
| Develop or maintain databases | 30 |
| Develop policies, procedures, methods, or standards | 21 |
| Develop scientific or mathematical hypotheses, theories, or laws | 62 |
| Develop tables depicting data | 33 |
| Direct and coordinate activities of workers or staff | 3 |
| Direct and coordinate scientific research or investigative studies | 27 |
| Draw maps or charts | 69 |
| Draw prototypes, plans, or maps to scale | 57 |
| Explain complex mathematical information | 30 |
| Identify properties of rocks or minerals | 85 |
| Interpret aerial photographs | 69 |
| Make decisions | 24 |
| Make presentations | 13 |
| Perform statistical analysis in physical science or geological research | 71 |
| Plan scientific research or investigative studies | 48 |
| Prepare environmental impact or related environmental reports | 81 |
| Prepare reports | 8 |
| Prepare technical reports or related documentation | 22 |
| Present research papers or dissertations on physical science issues | 78 |
| Read maps | 42 |
| Recommend further study or action based on research data | 60 |
| Use computer aided drafting or design software for design, drafting, modeling, or other engineering tasks | 58 |
| Use computers to enter, access or retrieve data | 3 |
| Use drafting or mechanical drawing techniques | 50 |
| Use field notes in technical drawings | 78 |
| Use geographic positioning system (GPS) | 81 |
| Use geographical information system (GIS) software | 72 |
| Use knowledge of investigation techniques | 16 |
| Use library or online Internet research techniques | 21 |
| Use mathematical or statistical methods to identify or analyze problems | 30 |
| Use measuring instruments to collect geological data | 89 |
| Use physical science research techniques | 68 |
| Use project management techniques | 47 |
| Use quantitative research methods | 35 |
| Use relational database software | 26 |
| Use scientific research methodology | 21 |
| Use spreadsheet software | 18 |
| Use word processing or desktop publishing software | 17 |
| Write research or project grant proposals | 33 |
| Write scholarly or technical research papers | 36 |

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus
Occupation to Associated
Occupation: 88

Focus Occupation: Geoscientists, Except Hydrologists and Geographers (19-2042)
Associated Occupation: Geographers (19-3092)

| Tools and Technologies | Exclusivity |
|--|-------------|
| Audio and visual equipment | 4 |
| Cameras | 2 |
| Chromatographic measuring instruments and accessories | 16 |
| Computer data input devices | 2 |
| Computer printers | 2 |
| Computers | 1 |
| Content authoring and editing software | 1 |
| Crystallography equipment | 23 |
| Cutting equipment | 56 |
| Data management and query software | 1 |
| Electrochemical measuring instruments and accessories | 9 |
| Forestry machinery and equipment | 31 |
| Geophysical and geotechnical instruments | 23 |
| Hydrological instruments | 31 |
| Indicating and recording instruments | 2 |
| Industry specific software | 1 |
| Information exchange software | 1 |
| Laboratory boring and grinding and cutting and crushing and pressing equipment | 27 |
| Laboratory centrifuges and accessories | 13 |
| Laboratory enclosures and accessories | 17 |
| Laboratory furnaces and accessories | 26 |
| Laboratory mixing and stirring and shaking equipment and supplies | 19 |
| Laboratory ovens and accessories | 15 |
| Laboratory sieves and sifting equipment and supplies | 27 |
| Land surveying instruments | 19 |
| Length and thickness and distance measuring instruments | 2 |
| Measuring and layout tools | 3 |
| Network applications software | 1 |
| Radar and sonar systems and components | 24 |
| Rock drills | 56 |
| Sampling equipment | 12 |
| Seismological instruments | 56 |
| Soil measuring equipment | 20 |
| Specialized and recreational vehicles | 17 |
| Spectroscopic equipment | 10 |
| Temperature and heat measuring instruments | 6 |
| Viewing and observing instruments and accessories | 4 |
| Weight measuring instruments | 7 |

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.